

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number
WO 2004/016192 A3

(51) International Patent Classification⁷: **A61F 2/06**

(21) International Application Number:
PCT/US2003/024690

(22) International Filing Date: 8 August 2003 (08.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/219,979 16 August 2002 (16.08.2002) US

(71) Applicant: **SCIMED LIFE SYSTEMS, INC.** [US/US];
One Scimed Place, Maple Grove, MN 55331-1566 (US).

(72) Inventor: **SHERRY, John**; 130 Bird's Hill Avenue, Need-
ham, MA 02492 (US).

(74) Agent: **WAR. Steven, M.**; Fulbright & Jaworski LLP,
Market Square, 801 Pennsylvania Avenue, N:W., Washing-
ton, D.C. 20004-2623 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

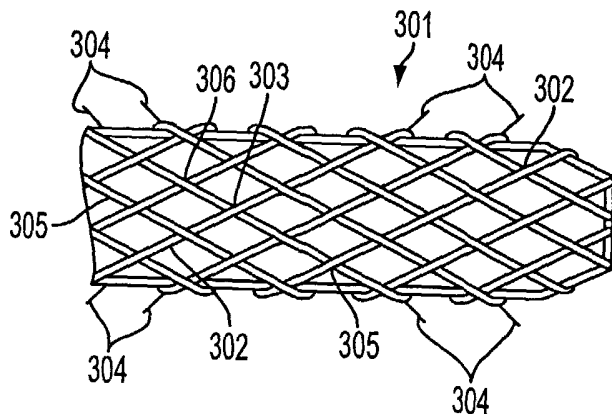
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
21 May 2004

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: COVERED STENTS WITH BIORESORBABLE BARBS



(57) Abstract: The present invention is directed at a removable stent for providing reinforcement to a selected region of a selected body lumen including a resilient cylindrical layer, including at least one bioresorbable extrusion exterior from the resilient cylindrical layer for resisting migration of the removable stent when the removable stent is positioned in the selected region of the selected body lumen. The present invention also includes a temporary implantable endoprosthesis which includes a tubular, radially compressible and axially flexible structure, including at least one bioresorbable extrusion exterior from the resilient cylindrical layer for resisting migration of the removable stent when the removable stent is positioned in the selected

region of the selected body lumen.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/24690

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61F2/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 902 317 A (KLESHINSKI ET AL) 11 May 1999 (1999-05-11)	1-6,9-14
Y	column 4, line 14-20; figure 3	7,8,15, 16
Y	--- US 2002/103527 A1 (KOCUR ET AL) 1 August 2002 (2002-08-01) page 4, paragraph 53 - paragraph 54	7,8,15, 16
A	--- US 6 383 214 B1 (BANAS ET AL) 7 May 2002 (2002-05-07) column 12, line 23 - line 56; figure 9 -----	1,9



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

2 April 2004

Date of mailing of the international search report

14/04/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Smith, C

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/24690

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 17-24
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/24690

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5902317	A	11-05-1999	US 5746765 A	05-05-1998
			US 5540712 A	30-07-1996
			CA 2191307 A1	07-12-1995
			EP 0788390 A1	13-08-1997
			JP 10504200 T	28-04-1998
			WO 9532757 A1	07-12-1995
US 2002103527	A1	01-08-2002	CA 2436241 A1	08-08-2002
			EP 1355589 A1	29-10-2003
			WO 02060351 A1	08-08-2002
			US 2004030218 A1	12-02-2004
US 6383214	B1	07-05-2002	US 6124523 A	26-09-2000
			CA 2215027 A1	19-09-1996
			DE 69518337 D1	14-09-2000
			DE 69518337 T2	01-02-2001
			EP 0814729 A1	07-01-1998
			ES 2151082 T3	16-12-2000
			JP 10510196 T	06-10-1998
			US 2002038143 A1	28-03-2002
			US 6004348 A	21-12-1999
			WO 9628115 A1	19-09-1996
			US 2003006528 A1	09-01-2003
			US 2003191519 A1	09-10-2003
			US 6579314 B1	17-06-2003
			US 5749880 A	12-05-1998
			US 2001039446 A1	08-11-2001
			US 2001025131 A1	27-09-2001
			US 2001021870 A1	13-09-2001
			US 6264684 B1	24-07-2001
			ZA 9510700 A	25-11-1996